DL ASSIGNMENT 2

Q1) artificial neuron has a function which gives output based on inputs and weights. It learns by predicting and checking and correcting its mistakes by updating weights. Biological neutron also learns patterns in real world through forward and backward propagations of electromagnetic signals.

Q2) ReLu, softmax, sigmoid, tanh.

Q3) perceptron has a function which gives output based on inputs and weights. The neutron learns by predicting classes and then checking and correcting its mistakes by updating weights.

Q4) each of the neurons in previous layer are connected to each of the neurons in next layer.

Q5) single and multi layers, single and multi nodes, convolution, recurrent etc.

Q6) back propagation works on updating weights via chain rule of differentiation. Limitations of back propagation include problem specificity and complexity, good data limitations, non linearity, types of activation functions etc.

Q7) multilayer neural network is required to solve complex problems, to understand non linearity and for better understanding of data and predictions.

Q8) deep learning uses artificial neurons. Learning rate can be adjusted to prevent overfitting/underfitting.

Q9) activation function can be smooth or have single threshold or multiple thresholds while threshold function has one threshold. Step function moves in steps while sigmoid function is smooth. Multilayer has more than one layer.